

**CLAIMS:**

1. An implantable medical device comprising:  
a plurality of interconnected modules, each of the modules comprising a housing; and  
an overmold that at least partially encapsulates each of the housings, wherein a  
surface of the flexible overmold is concave along at least one axis.
2. The implantable medical device of claim 1, wherein the surface of the overmold is  
concave along two axes.
3. The implantable medical device of claim 1, wherein the overmold is flexible.
4. The implantable medical device of claim 1, wherein the overmold comprises silicone.
5. The implantable medical device of claim 1, wherein the overmold comprises at least  
two materials.
6. The implantable medical device claim 1, wherein the surface of the overmold is  
concave such that the surface conforms substantially to the cranium.
7. The implantable medical device of claim 1, wherein the surface of the overmold is  
concave such that the flexible overmold conforms substantially to an arc, and a radius of the  
arc is within a range from 4.5 to 9.5 centimeters.
8. The implantable medical device of claim 7, wherein the radius of the arc is  
approximately equal to 7 centimeters.

9. The implantable medical device of claim 7, wherein the surface comprises a first surface of the overmold that is proximate to a cranium of a patient when the implantable medical device is implanted on the cranium, and a second surface of the overmold that is distal from the cranium when the implantable medical device is implanted on the cranium substantially conforms to the arc.
10. The implantable medical device of claim 1, wherein the modules are positioned within the overmold in one of a triangular configuration and a linear configuration.
11. The implantable medical device of claim 1, wherein the overmold completely encapsulates each of the modules.
12. The implantable medical device of claim 1, wherein the overmold does not encapsulate a portion of each of the modules that is proximate to a cranium of a patient when the implantable medical device is implanted on the cranium.
13. The implantable medical device of claim 1, wherein the housing of each of the modules comprises a surface that is proximate to a cranium when the implantable medical device is implanted on the cranium, and the surface of at least one of the modules is concave along at least one axis.
14. The implantable medical device of claim 13, wherein the module comprises a control module that includes control electronics, and the surface of the housing is concave along two axes.
15. The implantable medical device of claim 13, wherein the module is a power source module that include a battery with a wound coil construction, and the surface of the housing and the wound coil battery are concave along one axis.

16. The implantable medical device of claim 13, wherein the module is a power source module that include a battery with a foil pack construction, and the surface of the housing and the foil pack battery are concave along one axis.

17. The implantable medical device of claim 13, wherein the module comprises a recharge module that includes a recharge coil for inductively receiving energy, and the surface of the housing and the coil are concave along two axes.

18. The implantable medical device of claim 13, wherein the surface of the housing is concave such that the surface conforms substantially to the cranium.

19. The implantable medical device of claim 13, wherein the surface of the housing is concave such that the surface conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

20. The implantable medical device of claim 19, wherein the radius of the arc is approximately equal to 7 centimeters.

21. The implantable medical device of claim 19, wherein the surface of the housing comprises a first surface of the housing, and a second surface of the housing that is distal from the cranium when the implantable medical device is implanted on the cranium conforms to the arc.

22. The implantable medical device of claim 1, further comprising:  
a therapy delivery circuit to deliver stimulation to a brain of the patient; and  
control electronics to control the delivery of stimulation by the therapy delivery circuit, wherein the therapy delivery circuit and control electronics are located within one of the modules.

23. An implantable medical device comprising a housing that includes a surface that is proximate to a cranium of a patient when the implantable medical device is implanted on the cranium, wherein the surface is concave along at least one axis such that the surface conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.
24. The implantable medical device of claim 23, wherein the radius of the arc is approximately equal to 7 centimeters.
25. The implantable medical device of claim 23, wherein the surface is concave along two axes.
26. The implantable medical device of claim 23, wherein the surface of the housing comprises a first surface of the housing, and a second surface of the housing that is distal from the cranium when the implantable medical device is implanted on the cranium conforms to the arc.
27. The implantable medical device of claim 23, further comprising:  
a therapy delivery circuit to deliver stimulation to a brain of the patient; and  
control electronics to control the delivery of stimulation by the therapy delivery circuit, wherein the therapy delivery circuit and control electronics are located within the housing.